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Substantial Research Paper
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The Success of the Copenhagen Accord

and

The Failure of the Copenhagen Conference

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I. Introduction

In anticipation of the United Nations climate change conference in Copenhagen this past December, *The Economist* postulated that, "climate change is the hardest political problem the world has ever had to deal with" (*The Economist,* 2009). The global politics of climate change are difficult for several, largely economic, reasons.

For example, people today bear the costs to mitigate the greenhouse gas emissions causing climate change, but future generations, by and large, experience the benefits. Likewise, local or national communities incur the cost to reduce emissions, but the benefits are realized globally. In addition, developed countries are responsible for most greenhouse gas emissions that exist in the atmosphere, but developing countries will be most impacted by climate change. The large developing countries, though not responsible for the lion's share of emissions in the atmosphere, will nevertheless need to reduce their emissions in the future to avoid catastrophic climate change. Some of the countries, particularly those with territorial claims to mineral rights in Arctic seabeds, that stand to benefit from some level of climate change are also among the biggest emitters. Finally, high per-capita GDP correlates strongly with high per-capita emissions, and no large country has ever experienced lasting economic growth without simultaneously increasing emissions.

Given the breadth, depth, and complexity of these issues, it is perhaps unsurprising that more than thirty years have passed since the first World Climate Conference and fifteen years have passed since the United Nations Framework Convention on Climate Change (UNFCCC) entered into force, and still no global plan to reduce emissions has been accepted by all of the major emitters. While the Kyoto Protocol, which does represent a global plan to begin reducing

emissions in the developed world, entered into force in 2005, the United States—the world's largest emitter at that time, and still the largest historic emitter—has never ratified it.

Since the 13th Conference of the Parties (COP 13) to the UNFCCC in Bali in 2007, the global environmental community had been expecting 2009 to be a signal year for dealing with climate change. The focal point of attention—COP 15 at Copenhagen this past December—was expected to produce a legally binding treaty to reduce global emissions in the post-2012 era, after Kyoto's mandatory provisions end. The meeting produced the Copenhagen Accord, a three-page document (plus appendices) that represents more of a new start to dealing with the climate change problem rather than an end to the international negotiating process that began in Bali (or, depending on one's perspective, in Rio in 1992). Because COP 15 did not officially adopt the Copenhagen Accord, but simply "took note" of it, the future of climate diplomacy is unclear.

Diplomats in Bali decided to proceed to Copenhagen along two parallel negotiating tracks to determine post-2012 global action on climate change. One group—the Ad Hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol (AWG-KP)—excluded the United States and was specifically designed to determine developed countries' emission reduction targets in the post-2012 period. The second group—the Ad Hoc Working Group on Long-Term Cooperative Action (AWG-LCA)—included the U.S., and like the AWG-KP, it sought a post-2012 global climate regime, but it was less constrained by the existing dynamics of the Kyoto Protocol. While the two negotiating tracks were not formally linked, the expectation in Bali was that they would converge and conclude in Copenhagen (Pew Center, 2007) with a Kyoto-style agreement, highlighted by emission reduction targets for developed countries and timetables to reach them (Purvis and Stevenson, 2010).

But the two tracks did not converge in Copenhagen, and both working groups remain operational. The Copenhagen Accord, which represents a completely different approach to international climate policy, now joins them. As opposed to the internationally negotiated emission reduction targets and the economically efficient ways to meet them embodied in Kyoto, the Copenhagen Accord invites both developed and developing nations to simply submit their domestically determined mitigation strategies, however strong or weak they may be, to the UNFCCC for inclusion in an annex to the non-binding agreement. All national submissions are to be reviewed along with the overall agreement at regular intervals.

Because of the high expectations for Copenhagen coming out of Bali and the overwhelming scientific evidence pointing toward the accelerating destabilization of the global climate system, significant elements in the environmental community were dismayed by Copenhagen's outcome. A diverse group including Kumi Naidoo, executive director of Greenpeace International who labeled the accord "not fair, ambitious, or legally binding," (Vaughan and Adam, 2009) and Pope Benedict XVI, who lambasted the "political and economic resistance to combating the degradation of the environment," (Winfield, 2010) has strongly rejected the outcome of COP 15. Even President Obama, who, more than anyone, is personally responsible for the Accord, told PBS, "I think that people are justified in being disappointed about the outcome in Copenhagen."

Moreover, while Chinese Premier Wen Jiabao negotiated the Accord along with President Obama, China, at present the world's largest annual emitter, distanced itself from the Accord in the days following the conference. Todd Stern, the chief U.S. climate negotiator, reported: "Statements we have seen from China … do evince a desire to limit the impact of the [Copenhagen] accord, assuring that it is not treated as an operational document and that

negotiations going forward are based solely on the [ad hoc working groups], rather than on the accord, except perhaps where specific provisions of the accord are viewed favorably."

While the Obama administration enthusiastically supports the Copenhagen Accord, the ambivalence of China and the disapproval of prominent environmental voices calls into question whether the Accord will retain the requisite support to frame the future of the global response to climate change. This paper attempts to answer the question: Should it? Or, to paraphrase Maurice Strong, secretary-general of the 1992 Earth Summit: does the Copenhagen Accord represent "a success or a real success"? (Esty, 2009)[1]

To answer this question, this paper will borrow the six criteria introduced by Aldy, et al. in 2003 to evaluate climate policy architecture and apply them to the Copenhagen Accord to identify its strengths and weaknesses. After demonstrating that the Copenhagen Accord represents a viable approach to international climate policy and that, given current political dynamics, it approximates the best possible international response to climate change, I will argue that the accord's strengths, particularly its ability to attract participation and compliance, offer clear pathways to overcome its weaknesses, primarily its lackluster environmental outcome. Finally, I will argue that while the Accord itself was a success, its tenuous international legal standing coming out of Copenhagen requires a rethinking of the rules governing the COP.

The next section offers a brief review of literature about post-2012 global climate policy architectures generally and the Copenhagen Accord specifically. Section III examines the climate negotiations leading up to the Copenhagen conference and dissects the Accord itself. Section IV introduces the six criteria for evaluating environmental policy, and applies them to the Accord.

[1] "Maurice Strong joked in advance of [Rio] that, when hundreds of top government officials gather, only two outcomes are possible: 'success…and real success.'" The same logic applied to COP 15.

Section V analyzes why the Accord represents a successful approach to international climate policy. Section VI discusses why, despite the Accord's success, the Copenhagen conference failed and offers solutions to improve climate diplomacy going forward. Section VII concludes.

II. Reviewing the Literature

Post-2012 Climate Policy Architectures

Through a variety of print and on-line publications, the Harvard Project on International Climate Agreements explores the full breadth of policy architectures that might create a "scientifically sound, economically rational, and politically pragmatic" post-2012 global climate regime. One Harvard Project publication, *Architectures for Agreement: Addressing Global Climate Change in the Post-Kyoto World* (Aldy and Stavins, 2007) presents six proposals for successors to the Kyoto Protocol along with two commentaries on each proposal. Aldy and Stavins categorize the six proposals into three principal architecture types. The first type, "targets and timetables," is similar in design to the Kyoto Protocol in that it creates "quantified [emission reductions] goals over a specified timeframe" (Ibid). Such an approach can create smart, economically efficient policies that would endeavor to meet robust environmental goals, but the literature (and the experience of the Kyoto Protocol) suggests that it would be difficult, if not impossible, to effectively incentivize participation (and the accompanying loss of sovereignty), much less compliance in such a system (Bodansky, 2007).

The second category of approaches—harmonized domestic actions—is characterized by national policies integrated into a multilateral regime that either allows for variable domestic policies (Victor, 2007) or coordinates several different national emission trading regimes

(McKibbin and Wilcoxen, 2007). The broad outlines of Victor's approach are similar to what emerged in Copenhagen, though the scope of his proposal is broader (e.g., it includes a harmonized price of carbon across countries) than what is now represented by the Accord. Carlos Carraro's commentary highly recommends Victor's approach, but presages the strongest argument against the Copenhagen Accord by wondering if such an approach can generate the needed emissions reductions.

The third and final category of policy architecture contemplated—coordinated and unilateral policies—refers to bottom-up policies that allow countries either to determine and implement their own domestic measures or to coordinate their measures with other partners. Scott Barrett's approach focuses on the need to take action in several different arenas, including research and development, as well as standards and protocols for climate-friendly technologies. He also supports greater emphasis on adaptation than previous agreements had contemplated and advocates a willingness to consider geoengineering options to deal with climate change. He suggests that this suite of options might lead to enough breakthroughs to effectively deal with the crisis, though one of the commentaries rightly points out that he does not pay enough attention to the institutional framework, however minimal, necessary for such an approach to deliver any results (Jacoby, 2007).

Finally, the book considers a pledge and review process, which represents the closest example to the Copenhagen Accord. In "Practical Global Climate Policy," William A. Pizer focuses not on what the best architecture should be, but rather on what is the best outcome that can reasonably be expected. Before advancing his particular approach, he draws two primary lessons from the ongoing negotiations. First, he argues, "a binding international agreement is neither necessary nor sufficient for domestic action" (p. 302). A look at regional and state

policies in the United States (e.g., the Regional Greenhouse Gas Initiative in New England) and the fact that the European Union implemented its Emissions Trading Scheme prior to the Kyoto Protocol's compliance period, suggest that, contrary to the predictions of economic theory, communities are willing to enact meaningful climate policies outside of a full international agreement. Second, he posits that the policies of a given country are dictated above all by domestic politics, as can be seen in the suite of reactions to Kyoto, including by countries such as Canada, which ratified it, but then chose not to meet their obligation.

Reacting to these lessons, Pizer advocates that the climate concerned should "encourage countries to make *some* commitment to mandatory action, and focus our energy on a clear commitment to evaluate what actually happens" (p. 304). By so doing, one would create a "pledge and review" process by which nations domestically determine their own climate polices, which are then internationally reviewed at regular intervals. Throughout the chapter, Pizer notes that while this approach is not particularly tidy, it is nevertheless politically pragmatic. He continually stresses the importance of monitoring and evaluating national commitments as necessary for understanding what works best, so that such approaches might be replicated and expanded. He also reacts directly to the argument that such a policy would simply produce the status quo by noting the key difference of his approach: "a regular and persistent mechanism through which to prod countries toward stronger domestic policies through periodic evaluation and commitment exercises. Rather than the current UNFCCC/Kyoto process, where annual negotiations are an opportunity to disagree over international policies, the proposed process would have annual meetings that allow scrutiny of *national* policies" (p. 309, his emphasis).

Both commentaries believe that Pizer underestimates the efficiency gains of international trading systems, and question whether a pledge and review approach could ever deliver the

necessary environmental outcomes (Hammit, 2007; Montero, 2007). Pizer's approach receives an additional endorsement in Nobel Laureate Thomas Schelling's epilogue, which notes that pledge and review architectures have prompted action in the past, specifically in the cases of the Marshall Plan and the founding of the North Atlantic Treaty Organization.

Favorable Reviews of the Copenhagen Accord

Some prominent voices in the American environmental movement have made strong cases for a favorable view of the Copenhagen Accord. Roger Ballentine, chairman of the White House Climate Change Task Force in the Clinton Administration, argues that three key results of the Accord recommend it. First, it badly weakens the UNFCCC process, an unnecessarily difficult forum for negotiating a global solution to climate. Second, by calling for mid-term (i.e. 2020) emissions reduction targets, it invigorates carbon-impact evaluations in capital markets, thereby promoting low-carbon business decisions. And third, it demonstrates a willingness in China and India to engage on climate not on the basis of aid, but on the basis of commerce, again promoting a private sector response to the problem, which he believes is necessary for an effective solution (Ballentine, 2010).[2]

David Doniger, policy director for the Natural Resource Defense Council's Climate Center, argues that the Accord produced three key goals: emission cuts by big emitters, a framework for measuring and verifying emission reduction pledges, and large financial commitments from the developed world to help the developing world deal with climate change. Doniger proceeds to refute a number of concerns about the Accord. While acknowledging that the implied national emission reductions or actions would not be strenuous enough to keep global temperatures from rising more than two degrees, he argues that a significantly better

[2] I work with Roger Ballentine and assisted in writing the original memo of which the blog post cited here is an excerpt.

environmental outcome was impossible because of the domestic politics of the major emitters. He defends the Accord's non-binding legal status as pragmatic, by echoing UNFCCC executive secretary Yvo de Boers' argument that "some countries are more inclined to get on the train if they know they are allowed to get off." Like Ballentine, Doniger argues that pushing the negotiations away from the UNFCCC process and toward the Major Economies Forum—a meeting between the climate representatives of the 17 nations that account for the lion's share of global emissions—is a promising development. Furthermore, he states that the Accord increases, however slightly, the chances of the Senate passing a climate change bill (Doniger, 2009).

In his blog *An Economic View of the Environment*, Robert N. Stavins, director of Harvard's environmental economics program, wrote two posts about the Copenhagen Accord, both of which view it favorably. In "What Hath Copenhagen Wrought? A Preliminary Assessment of the Copenhagen Accord," Stavins calls the Accord "a sound foundation for meaningful long term action," that was the best that could have been reasonably hoped for at COP 15. Before an in-depth summary of the Accord itself, Stavins argues that the Accord is "*potentially very important*" because it includes emissions limits by the BASIC countries (i.e., Brazil, South Africa, India and China) and extends emission reductions past the 2012 Kyoto deadline (Stavins, 2009, his emphasis).

Stavins focuses singularly on the future of the UNFCCC process in a subsequent post, "Another Copenhagen Outcome: Serious Questions about the Best Institutional Path Forward." Before stating, "whether the next steps in international deliberations should be under the auspices of the UNFCCC or some smaller deliberative body … is an important and open question," Stavins notes four key problems with the UNFCCC process: It involves too many countries; it polarizes discussions between the developed and developing world; it requires unanimity for

most decisions; and its leadership is inadequate for the complex task before it. Stavins proposes both the G-20 and the Major Economies Forum as possible alternative and/or supplementary forums for reaching a new global agreement but acknowledges problems with those venues as well, namely their limited participation and focus on economic rather than environmental issues (Stavins, 2010).

Unfavorable Reviews of the Copenhagen Accord

There has been no shortage of critical reviews of the outcome of the Copenhagen conference; in fact, environmental activist and writer Bill McKibben wrote in the March 11, 2010 issue of the *New York Review of Books* that "around the world the verdict was that the conference had failed spectacularly."

McKibben found such failure to be particularly vexing in light of recent scientific evidence "that global warming was advancing far more rapidly than even the gloomiest predictions had asserted." Accordingly, he noted an increasing convergence around the need to bring the atmospheric concentration of carbon dioxide down to 350 parts per million and quoted *Foreign Policy*, which called the international effort to raise attention about the need to lower the atmospheric concentration the "largest ever coordinated global rally of any kind." Moreover, he observed that by the end of COP 15 more than half of the countries assembled, 112 of the 193 total, had formally enforced the 350 target.

These countries, however, were not the ones that negotiated the Copenhagen Accord, nor are they the ones likely to materially influence the negotiations going forward, according to McKibben. Rather, "the direction of climate policy will be determined by what amounts to an AA meeting for still-active coal and oil drunks—chief among them the U.S. and China—who at the moment are making very vague promises about reducing their consumption a decade or two

down the road." Indeed, McKibben argues that not only are the emissions reductions and mitigations actions submitted by the U.S. and China, respectively, under the Copenhagen Accord insufficient, the $100 billion in annual funding by 2020 for developing countries to mitigate and adapt to climate change is too little by a factor of three or four.

Ultimately, McKibben blames the U.S. and China for the Copenhagen outcome, specifically faulting Obama for not being more aggressive in pushing Congress to enact more rigorous climate legislation and the Chinese for being unwilling to endorse emission reductions or a date for peaking their emissions. At bottom, McKibben's principal lament was the fact that, at Copenhagen, politics trumped science.

Indian writer and environmentalist Malini Mehra makes the same point in her piece, "Copenhagen - the Munich of our times?" stating: "Copenhagen made depressingly clear that 'political realism' has trumped 'climate realism.'" Throughout her piece she makes a full-throated rebuttal of what she calls the Accord's "anemic" pledge and review approach, blaming a broken UN process for the meeting's outcome.

She reviles the Accord because "it is not legally-binding, contains no mid-term or long-term targets for emissions reductions, and—critically—does not refer to a 'peaking' year for global emissions." She calls COP 15's outcome "effectively an agreement for business-as-usual," and "an appeasement to major polluters that condemns the world to runaway climate change and declares war on our children." She places blame for the outcome on the United States, on Europe for going along with the U.S., and on China and India, who "showed that they were the new power players and would act as nakedly in their self-interest as the western powers." She argues that these nations were not effectively countered in Copenhagen because of outdated bloc politics, which no longer serve a world not as well delineated between developed

and developing countries. To rescue the world from the ravages of Copenhagen, she argues that "the nations that are putting their faith in strong decarbonization and green growth—such as Mexico, South Koreas, Brazil, and the EU ... need to make common cause … and devise a new politics of climate common security and economic prosperity."

Gap Analysis

As *Architectures for Agreement* indicates, significant theoretical work has been done to consider the strengths and weaknesses of various policy architectures to guide the world in coordinating a response to climate change. Yet while many credible voices have analyzed the strengths and weaknesses of the Copenhagen Accord and given an initial response, these responses largely fail to consider the insight that the theoretical work can provide. Doubtless, such a failure is largely endemic to the platform on which most of these writers present their work; blog posts and newspaper and magazine articles simply are not prime venues for an in-depth consideration of the theoretical implications of a given policy choice. Moreover, most immediate responses to the Accord failed to recognize its legal implications and lacked the historical perspective to witness the diplomatic maneuvering that occurred in the weeks after the conference.

While this paper is, of course, also subject to the lack of insight that will be afforded to later studies, this medium does offer the opportunity to apply the lessons of theoretical policy analysis to the Accord. Before doing so, however, we will introduce the Accord itself.

III. The Road to and the Product of the Copenhagen Conference

The Path to COP 15[3]

The Copenhagen Accord resulted from the dynamics of international climate diplomacy, many of which have remained virtually unchanged since the negotiations that produced the Kyoto Protocol. The most significant dynamic is that between the United States and the large developing countries, principally China. During the drafting of Kyoto, China refused to accept any binding limits on its emissions or to negotiate any process that attempted to introduce such new commitments (Cooper, 1998). The Senate, meanwhile, clarified the position of the United States by unanimously passing the Byrd-Hagel Resolution, which states that "the United States should not be a signatory to [the Kyoto Protocol or any other international agreement] … which would mandate new commitments to limit or reduce greenhouse gas emissions for [the United States] unless the protocol or other agreement also mandates new specific scheduled commitments to limit or reduce greenhouse gas emissions for Developing Country Parties within the same compliance period" (U.S. Senate, 1997).

The resolution made clear to the Clinton Administration that in negotiating the Kyoto Protocol they had promised more than Congress was willing to deliver. Though Vice President Gore did sign the Kyoto Protocol, neither President Clinton nor President George W. Bush ever presented it to the Senate for ratification. Kyoto's fundamental architecture, which required binding emission reductions from industrialized countries, but nothing from developing countries nor a clear path to make them limit their emissions growth in the future, was simply incapable of

[3] For a complete review of the negotiations and result of the Bali conference, see The Pew Center's 2007 piece cited at the end of this document. Purvis and Stevenson's study also includes a thorough examination of the pre-Copenhagen dynamic and how it impacted the negotiations.

delivering the 67 Senate votes necessary for ratification. So as much of the rest of the world went about implementing the Kyoto Protocol's emission reduction targets and alternative financial mechanisms, the United States remained on the sidelines throughout President Bush's two terms, refusing to limit or reduce emissions for fear of the economic consequences.

The Bush Administration did come to COP 13 in Bali, however, willing to negotiate a path towards a post-2012 agreement (when Kyoto's mandatory provisions end). Nevertheless, their negotiating posture still reflected the Byrd-Hagel resolution, and the Bush Administration unequivocally stated that a post-2012 agreement should reflect nationally defined commitments—not an internationally binding, top-down Kyoto-style approach. The meeting delivered the Bali Roadmap, which reflected a comprise by which the developing countries agreed to *consider* taking "measurable, reportable, and verifiable" emission limits supported by technological and financial support from industrialized countries. The Roadmap included an explicit goal to reach a post-2012 agreement at COP 15 in Copenhagen but precious little in terms of details about the architecture of the post-2012 deal, its legal status, or what types of actions nations should be prepared to take. Those details were to be worked out in the intervening two years. However, because of the Bush Administration's lack of engagement, global negotiations could not really reignite until Barack Obama's January 2009 inauguration.

President Obama campaigned on a goal of reducing U.S. emissions to roughly 1990 levels by 2020 and more ambitiously thereafter, and was quick to appoint key climate negotiators, even avoiding Senate confirmation in some cases. Nevertheless, the Administration had little time or appetite to engage on climate diplomacy in the first six months of 2009 because of an otherwise packed foreign policy agenda that included two wars and the need to reset the tenor of relations with many key allies, particularly the Europeans.

Following Bali, Europe first articulated a comprehensive plan for the post-2012 era. Tethered to a goal of limiting the global temperature rise to 2 degrees, their top-down plan, which could roughly be described as an expansion of the Kyoto Protocol, envisioned legally binding emission reductions for all industrialized countries. The U.S. was unwilling to forcefully or publicly push back against this approach, and as a result, according to former U.S. negotiator Nigel Purvis, "by early 2009, Europe's strong, top-down approach had become the yardstick for Copenhagen's success in much of the world. Europe's approach was popular with the European public, environmental groups in the United States, and governments in some least developed countries, which welcomed a robust, science-based vision" (Purvis and Stevenson, 2010, p. 5).

Aware of the roadblock that the Clinton Administration encountered by negotiating Kyoto ahead of Congress, the Obama Administration took care throughout 2009 to keep the international process from proceeding too far ahead of Capitol Hill. In June 2009, the House of Representatives narrowly passed a climate bill to reduce U.S. emissions 17% below 2005 levels by 2020.[4] The Senate worked on a number of different bills, but was unable to craft anything worth bringing to the floor for a vote prior to the Copenhagen meeting. Most of the introduced legislation was explicit about the importance of strong climate action by both China and India. The House-passed bill included a section devoted to implementing a "carbon tariff" on energy-intensive imports from nations who were not subject to emission reductions themselves (i.e., China and India), and the one climate bill passed by a Senate committee included a requirement that EPA present a report to Congress on the domestic policy steps China and India were taking to deal with climate change.

[4] World Resources Institute analysis suggests that the real reduction would be closer to 23 to 28% due to the bill's funding of avoided deforestation internationally.

Despite the logjam in the Senate, the Obama Administration nevertheless pursued progress in a number of international forums. The White House established bilateral deals with both India and China, expanding upon programs started by the Bush Administration, by making climate policy and clean energy technology collaboration key elements of these relationships going forward. The Administration convened the first meeting of the Major Economies Forum (MEF). They also brought climate change to the attention of the G-20, putting the issue on the agenda of a meeting of the world's most powerful financial ministers in Pittsburgh in December. Nevertheless these venues and the pre-Copenhagen sessions of the UNFCCC served more to expose the ongoing, fundamental disagreements between major nations than to portend any breakthrough at COP 15.

China, India, and the major developing countries still resisted internationally binding limits on their emissions, and the United States was not willing to reduce its emissions without verified action from those countries. While the MEF meeting was able to produce a declaration to limit global temperature rise to no more than two degrees, China and India maintained objections to the proposed goal of reducing emissions by half by 2050, peaking their emissions by any particular year, and accepting international verification of their actions to mitigate climate change (Purvis and Stevenson, p. 6). In short, despite some good faith efforts, by autumn of 2009 it was clear that the hopes for Copenhagen coming out of Bali had been too high. In November, President Obama and other international leaders, included Yvo do Boer, the head of the UNFCCC, stated publicly that the expectation for the outcome at Copenhagen should be ratcheted down from a legally-binding deal to a "politically-binding" one. What emerged was arguably more ambitious than anticipated.

The Negotiations in Copenhagen

The two-week meeting in Copenhagen was deadlocked with roughly 36 hours remaining when Secretary of State Hillary Clinton announced that the U.S. (through a combination of public and private sources) would contribute up to $100 billion per year by 2020 to help developing countries reduce emissions and adapt to climate change. Secretary Clinton's announcement changed the tenor of the conference, which had shortly before seen a number of the least developed countries stage a walkout. The promise of funding created an incentive for the least developing countries to push China to agree to international verification of its emission reductions, an issue that had become a major sticking point threatening to derail the negotiations. Nevertheless, when President Obama made his initial address in Copenhagen on the morning of the meeting's final (scheduled) day, the outcome of the conference was still in doubt.

Typically in international negotiations, heads of government appear at the end of the meeting to sign an agreement already negotiated by the diplomatic corps. Copenhagen was remarkable in that President Obama and his counterparts actually negotiated the final agreement. In the summit's most dramatic moment, President Obama entered a meeting between the presidents of China, India, South Africa and Brazil. Brazilian President Luiz Inácio Lula da Silva reportedly gave President Obama his seat, and President Obama helped broker the final Accord, negotiating extensively with Chinese Premier Wen Jiabao.

The full Conference of the Parties simply "took note" of the Accord, which Yvo de Boer, head of the UNFCCC, said "is a way of recognizing that something is there, but not going so far as to associate yourself with it." Nevertheless, de Boer acknowledged the "magnitude of the commitment," characterizing the three-page document a "letter of intent" to deal with climate change.

The Copenhagen Accord: Reductions, Finance, and Transparency

The Copenhagen Accord includes three main provisions: 1) emission reduction commitments; 2) financing for mitigation and adaptation in the developing world; and 3) transparent international review of the implementation of the commitments. The Copenhagen Accord embodies a "pledge-and-review" approach, which was proposed by Australia in spring 2009 and has been a favorite of American diplomats dating back to the Bush Administration. Unlike in the Kyoto Protocol, in which the emission reduction commitments by nations were negotiated internationally, in the Accord, developed nations simply submit a quantified economy-wide emission target for 2020 using whatever base year they wish. In a more meaningful break with the Kyoto Protocol, the Accord also invited developing countries to submit their "nationally appropriate mitigation activities."

The Accord also makes two important financial commitments to address the needs of developing countries in mitigating and adapting to climate change. Collectively, developed countries pledged $30 billion in new and additional sources to the developing world for the period 2010-2012. Moreover, developed countries committed to provide up to $100 billion to developing countries per year by 2020. The $100 billion per year is to come from public and private sources and be delivered both bilaterally and multilaterally.

Importantly, the Copenhagen Accord addresses the issue of transparency in the reporting of mitigation actions by developing countries. As noted above, China had resisted international verification of its pledged carbon intensity reduction but compromised in the final deal. Under the Accord, mitigation actions by developing nations undertaken without financial support from the industrialized countries would be measured, reported and verified domestically with "international consultation and analysis," an intentionally vague phrase intended to be defined

later by the COP. Emission targets for developed countries would be measured, reported, and verified internationally, and likewise any mitigation actions taken by developing countries with financial support from the developed world would also be subject to an international verification process to be established by the Parties.

These review elements are integral to the Accord. While reports aggregating the emission reduction commitments made by the parties demonstrate that the commitments will likely fall short of delivering the required short-term environmental outcome (Levin and Bradley, 2010), such commitments represent only half of the approach as explained above. The regular review of pledges by both developed and developing countries is a critical element of a "pledge and review" climate architecture because it demonstrates 1) what does and does not work globally and for particular countries and regions, 2) (hopefully) that emissions limits and reductions can be compatible with economic growth; and 3) that a given country is implementing its pledge in good faith. In this way, the review process is intended to make it easier for countries to consent to future agreements with more stringent emission reductions.

As discussed below (Section VI), the tenuous legal position of the Accord calls into question whether some important elements of the Accord, particularly the review process, will indeed be implemented. Before considering the Accord's implementation, however, we will evaluate the Accord and discover that it, indeed, represents an approach worth adopting.

IV. Applying a Rubric to the Copenhagen Accord

In 2003, Aldy, et al. employed six criteria to evaluate and compare the Kyoto Protocol and 13 other proposed global climate policy architectures. Their criteria—environmental

outcome, dynamic efficiency, cost-effectiveness, equity, flexibility, and compliance and participation—reflect the complexity of the climate change problem and the desire to address various, sometimes competing, interests through global policy. The fact that, as the authors note, tensions exist among some of the criteria demonstrates the inclusiveness of this particular rubric. Moreover, those tensions underscore the fact that this rubric is not designed to deliver an absolute "score" of a particular climate policy architecture but rather to help one evaluate the strengths and weaknesses of particular approaches. Indeed, a careful exploration of these criteria helps one better understand the complex and competing issues that surround climate change policy. As such, this rubric is well-suited to the task of evaluating the Accord.

After explaining the six criteria in some detail, I will use it to evaluate the Accord, finding that the agreement scores poorly in terms of environmental outcome and equity, but well on flexibility and participation and compliance.

Environmental Outcome

For many, the most important criterion in evaluating a global climate policy approach is the environmental one. A tendency of many policy analysts is to view the environmental outcome of any particular climate policy simply in terms of the emission reductions. As a rule, greater percentage reductions in emissions and older the baseline years for measuring those reductions are better than weaker emission reductions and later years. In other words, a 20% reduction below 1990 levels is better than a 15% reduction below 2005 levels. The reality, of course, is that emission reductions are simply proxies for the environmental outcome that computer models anticipate from particular emission reduction paths. Because carbon dioxide and other greenhouse gases can remain in the atmosphere for a century or longer, however, various emission reduction pathways can result in similar atmospheric concentrations of

greenhouse gases that deliver, in essence, the same environmental outcome. (Wigley, et al., 1996).

Assuming that more stringent emission reduction targets in the short run cost more to meet, an economist might argue that only emission reductions that cost less than or equal to the benefits received from those reductions are justified and acceptable. (This concern is addressed more thoroughly in the next criterion, dynamic efficiency.) The larger point is that any particular emissions pathway embodies certain trade-offs. In addition to costing more, more aggressive pathways would likely necessitate the use of additional nuclear power, which has its own environmental effects (Aldy, et al. 2003, p. 374).

Another possible side effect of some global climate policies, particularly those that require significant, short-term emission reductions from a relatively small number of countries is "carbon leakage." Carbon or emissions leakage occurs when there are different (explicit or implicit) prices for emitting greenhouse gases in various countries; if price differences are pronounced enough, particular industries and the emissions associated with them could move or "leak" from regulated economies to unregulated ones. While all countries would be complying with their part of the treaty, global emissions might not actually be reduced. The likelihood, however, is that carbon leakage—to which the European Union is already susceptible because of the comparative strictness of its climate policy—is confined to a small set of energy-intensive, trade-exposed industries, and that policymakers can find ways to mitigate against any extensive leakage (Carbon Trust, 2009).

Analyzing the environmental outcome of a particular treaty depends on comparing it to what would have happened without the treaty. Such a comparison is difficult for several reasons, including the uncertainty in the relationship between the levels of emission reductions and the

environmental impacts of the climate change associated with them; future economic growth assumptions and the emissions that result from them; and levels of compliance. While predicting the environmental outcome a given policy might produce is difficult, observing it is impossible, simply because one cannot definitively know what would have happened if a particularly policy were not put in place (Aldy, et. al, 2003, p. 375).

The difficulties in actually observing and analyzing the environmental outcome of a given climate policy do not, of course, minimize the paramount importance of the environmental outcome for global climate policy. And, while national climate policies are often advertized as policies that also increase energy security, such a concern is not particularly germane to the global climate policy discussion. Moreover, it is noted nowhere in the text of the UNFCCC, which aims solely to "prevent dangerous anthropogenic interference with the climate system" (UNFCCC, Article 2).

Dynamic Efficiency

Dynamic efficiency is an economic concept that attempts to measure efficiency—the most benefit for the least cost—across time periods. As a concept concerned with the "aggregate net benefits" that flow from a given policy approach over time, it represents a way of balancing and considering the actions, impacts, benefits, and costs of a given climate policy approach over time (Aldy, et. al, p. 375). For an economist who is chiefly concerned with dynamic efficiency, the environmental outcome criterion is redundant, as dynamic efficiency captures the environmental benefits of the policy (Ibid, p. 374). Like the environmental outcome criterion, dynamic efficiency is difficult to measure and predict. The costs, benefits, and impacts of given climate policy measures are difficult to measure because of the lack of certainty of scientific

predictions about the impacts of climate change[5], the difficulty of identifying and quantifying benefits, and the unpredictability of technological breakthroughs that could significantly change cost estimates.

Former Harvard president and current economic advisor to President Obama Larry Summers describes dynamic efficiency as a "long-term dynamic optimization process." Summers argues that even if policymakers want to stop greenhouse gas emissions, it is difficult to determine the best course of action because of the great uncertainty involved. On the one hand, there is potential for significant impacts down the road, so we should deal aggressively with climate change now. On the other, as time passes, we will learn more about the costs of climate change, and as a result be in a better position later to deal with the problem more efficiently (Summers and Zeckhauser, 2008).

Dynamic efficiency in the climate context revolves around two particularly difficult issues: irreversibility and intergenerational equity. Both climate change problems and solutions are characterized by irreversibility, from the physical characteristic of the greenhouse gases that accumulate in the atmosphere, which are not easily removed, to the capital infrastructure of power generation, which can last for more than 50 years. (Aldy, et al, p. 376). While automobiles may not last as long as coal power plants, converting factories to produce electric batteries is still a long-term investment that with a payback period measured in decades.

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[5] One of the more disturbing elements of the climate debate is the lack of scientific literacy that it reflects among many educated people in the United States. The unfortunate result is for some climate action advocates to therefore argue that the science of climate change is closed, though climate scientists know that it is not.

It is clear that the earth is warming as a result of human activities associated with greenhouse gas emissions. There is less certainty, however, about what precisely the impacts of that warming will be. We know, for example, that glaciers will melt, but not when and how quickly. This lack of scientific certainty about the timing and force of climate impacts makes designing climate policy particularly difficult.

A difference exists between economists and environmentalists in the ways they might approach this problem. Some economists might suggest that the irreversibility of capital investment is comparable to the irreversibility of greenhouse gas emissions. Once one takes into account the relevant variables, (i.e., the marginal cost of building renewable energy generation, the marginal benefits of abating a unit of greenhouse gas emissions, the time value of money, etc.) the problem is an empirical one that can be solved through cost-benefit analysis or some more complicated version of it that takes into account time series (Fisher and Narain, 2002). Some environmentalists, on the other hand, might argue that the environmental impacts of additional greenhouse gas emissions could be so severe that maintaining atmospheric carbon dioxide levels near historic levels is the only morally justified thing to do. In other words, climate protection is best viewed through a moral lens rather than an empirical one.

Due to its consideration of extended periods of time, dynamic efficiency also touches another thorny issue: intergenerational equity. The concept of intergenerational equity (also relevant to the equity criterion) argues that future generations are as valuable as current ones. In conventional economic analysis, a discount rate is used to compare consumption between generations. Consumption is usually discounted in the future because of the time value of money (money is worth more today than it will be tomorrow) and because future generations are expected to be more prosperous. In his landmark 2007 *Review of the Economics of Climate Change*, Nicolas Stern proposed using a 1.4% discount rate, which is considerably lower than most traditional models.[6] That technical detail quickly came to dominate much of the academic discussion around climate change economics. As a result of the prominence of discounting, much of the climate change economics literature revolves around economists arguing about the

[6] The United States government, for example, uses a standard discount rate of 7%. Private investors typically use a higher one.

value of future needs vis a vis current ones, an argument likely better conducted by philosophers. The strongest argument for the use of a discount rate comes from Cass Sunstein, who argues that because discounting accounts for opportunity costs, zero discount rates—favored by many environmentalists—would likely lead to worse decisions for future generations (Sunstein and Weisbach, 2008). Discounting, or the weight one places on the future in comparison to the present, matters because it indicates what climate policy path one would likely follow. If a low discount rate is used, significant short-term action is required; if a high one is proposed, actions can be delayed and implemented less aggressively.

As the discussion on discounting and irreversibility demonstrates, dynamic efficiency is an issue fraught with judgments about how to deal with uncertainty, handle risk, and balance the needs of the future and the present. Given these various considerations, "[applying dynamic efficiency] to climate change policies is challenging … where the policy proposals do not specify long-term emissions paths" (Aldy, et al, p. 376). While the application of any one of the six criterion has its own difficulties, evaluating how efficiently a climate policy balances costs and benefits over time is likely the most difficult. From the perspective of some economists, it also likely the most valuable.

Cost-effectiveness

Compared to the previous two criteria, cost-effectiveness is simple. It merely attempts to determine if a particular policy follows "the least costly means of achieving some target or goal" (Ibid). It is therefore different from cost-benefit analysis in that no attempt is being made to identify or quantify benefits. By avoiding the uncertainty and difficulty inherent in quantifying the precise environmental benefits of particular emissions pathways, this criterion allows for easy comparison between competing policy proposals.

Two competing proposals conceptually before the U.S. Congress to reduce emissions provide an opportunity to see precisely how this criterion would be used.[7] The American Clean Energy and Security Act of 2009 passed by the House of Representatives last June would achieve domestic emission reductions of 17 percent below 2005 levels by 2020. To achieve this goal, it establishes a cap and trade system in which covered entities are required to hold emissions permits for every ton of carbon dioxide they emit. Under the bill, at first most polluters would be given a sizeable portion of the permits they need for free, and the number they would have to purchase from the government or on the open market would rise over time. Also under the bill, consumers would be shielded from many of the price increases. This approach is largely seen to be less cost-effective than a similar cap-and-trade bill proposed by Senators Maria Cantwell and Susan Collins under which polluters receive no permits for free and consumers are not shielded from price increases.

By not granting free permits to polluters and letting consumers feel the full price increases, the Cantwell-Collins proposal would provide greater incentives for polluters and consumers both to change behavior and reduce emissions immediately. As such, it is seen as more cost-effective, though less politically viable because of the need to satisfy particular swing votes in Congress. The Senators' bill varies in other important ways from the House-passed bill (e.g. it has more aggressive emission reduction targets, caps upstream sources of greenhouse

[7] Given that most of the climate bills that have been introduced in this Congress have well spelled out emissions pathways from 2020 through 2050 (with interim goals), one could also measure their dynamic efficiency. Such an analysis, however, is outside of the scope of this paper.

gases—like coal miners—rather than emitters, and provides refund checks to consumers) but remains a more economically sound policy.[8]

Cost-effectiveness simply looks at the most efficient economic means of achieving a given target and says nothing about the target itself. Thus, cost-effective policies could be "fast trains to the wrong station" (Ibid). Moreover, cost-effectiveness is included in the dynamic efficiency criterion (Ibid), but given the difficulty in measuring dynamic efficiency and the relative ease of measuring cost-effectiveness, it provides a more practical metric to ensure that some standard economic valuation is included in the overall rubric.

Equity

Measuring the equity of a particular climate change policy involves evaluating who wins or loses. To do so, one must also consider who is responsible for the climate change problem—both historically and projected into the future—who can afford to pay to solve the problem, and who would enjoy the most benefits from policies that slow or abate catastrophic climate change (Ibid, p. 377).

Article 3.1 of the UNFCCC refers to the "common but differentiated responsibilities and respective capabilities" of the parties, and states that while all parties to the UNFCCC have the common responsibility to protect the climate system, the developed countries are expected to bear the majority of the cost and burden of mitigating emissions. That differentiation is largely a reflection of the facts that developed countries bear the overwhelming responsibility for the emissions that have lead to the "climate crisis," and that they have a greater ability to pay to fix it.

While many have observed that China recently surpassed the U.S. as the leading emitter

[8] For a more thorough comparison of the House-passed bill and the Collins-Cantwell legislation, see McKibben, Bill, "Bringing the Heat."

of greenhouse gases, as Table 1 indicates, the U.S. still greatly outpaces China in per capita emissions.

Table 1: Greenhouse Gas Emissions Profiles for Select Countries[9]					
Country	**2005 Greenhouse Gas Emissions from Energy (10^6 metric tons)**	**2005 Greenhouse Gas Emissions (metric tons) from Energy per capita**	**Cumulative (1900-2005) Emissions (10^6 metric tons)**	**Cumulative (1900-2005) Emissions (metric tons) per capita**	**Per Capita GDP (in PPP, 2009)**
China	6,018	4.58	92,949	71	$6,600
Germany	858	10.41	73,208	888	$34,100
India	1,293	1.16	25,895	23	$3,100
Japan	1,247	9.78	42,742	335	$32,600
United States	5,903	19.78	318,432	1,066	$46,900

Climate change is caused by the accumulation of CO_2 and other greenhouse gases in the atmosphere over time. Therefore, it is also helpful to consider countries' cumulative emissions. Under this analysis it is clear that developed countries, such as Germany, Japan, and the United States, are much more responsible for climate change, though distinctions exist between the developed countries. While the U.S. emits roughly twice as many greenhouse gases per person right now as Germany and Japan, historically, the U.S. has more emissions than the other four countries combined. Again, per capita cumulative emissions add more perspective, as each American and each German are roughly equally responsible for the same amount of emissions, while each Japanese citizen is only culpable for about a third of that total.

Given this backdrop, it is understandable why China and India argue that they should be

[9] Numbers in Table 1 are from the U.S. Department of Energy's Energy Information Agency, the World Resources Institute, and the CIA World Factbook.

expected to do less than the developed countries about climate change. These numbers, however, do not reflect the reality that the majority of projected increases in emissions will come from the large developing countries, particularly China and India. Indeed, the World Resources Institute has projected that by 2025, developing countries will account for 55% of annual global emissions. That same analysis also demonstrates the incredible variety of emissions profiles within developing countries. Even if the entire continent of Africa, for example, were to increase its emissions 80 percent above 2000 levels by 2025, its total emissions would still be roughly half those of China in 2000 (Baumert, Herzog, and Pershing, 2005). To slow—and ultimately reverse—the rise of global emissions, the large developing countries and the developed countries need to mitigate their emissions.

While the large developing countries increasingly bear some of the responsibility for global climate emissions, as the last column on Table 1 demonstrates, they still are far behind typical developed countries in their ability to pay for emission reduction technologies. While, as the difference between per-capita GDP in China and India indicates, large differences in terms of ability to pay exist among developing countries, it is important to note that both countries are far below the global average GDP per-capita (in purchasing power parity) of $10,500 (CIA, 2010).

To the extent that climate policy should favor mitigation actions by those who stand to most benefit from them, there is greater parity between developed and developing countries. While developing countries are the most vulnerable to climate change, developed countries may stand to benefit more, because of their greater prosperity (Aldy, et al, p. 377). As Bob Dylan succinctly notes, “when you ain’t got nothing, you got nothing to lose.”

As explained earlier, global climate policy must also consider equity from an intergenerational perspective. Perhaps the most important consideration to add, given the new

perspective on global income disparity, is that while a low discount rate would value future generations more highly and thus indicate policies that would benefit them more greatly, that would likely demand a trade-off in which fewer resources would be available to help the global poor now (Schelling, 1998). Even if climate change assistance is provided in addition to traditional development aid, at some point the total amount of direct aid transfers, be they climate- or development-related, can rise no higher because of domestic political pressures in the developed world, particularly during times of recession and high unemployment. While the amount of climate funds could be increased through developed country initiatives that allow for offset projects in the developing world, there remains political pressure to limit international transfers of both government and private funds even through offset projects.

Flexibility

Flexibility simple refers to the need for climate policy to be able to adapt to new scientific findings related to climate change. While the overwhelming majority of new findings demonstrate that the global climate is changing more rapidly than even the more dire earlier scientific predictions had expected, new findings could presumably also indicate that the climate is changing more slowly than expected. Regardless, the best policies will have built-in mechanisms to allow for relatively quick integration of the latest science.

Participation and Compliance

Participation means that a country signs on to a global climate treaty; compliance means that they meet the treaty's obligations. While the previous five criteria are as well-suited to evaluate domestic as international climate policy, participation and compliance are solely relevant to international policy, since compliance and participation are taken as given for most domestic policies, particularly in the developed and large developing countries. The nature of

international treaties, however, necessitates that one consider the ability of a particular treaty to invite participation from relevant states, because nations are free to choose or not to choose to sign on to any treaty.

Pressure to reduce greenhouse gas emissions comes from the scientific consensus, environmental activists, and other nation states. There is little about global climate policy itself that de facto invites participation in an international climate treaty. As Aldy, et al write, "as long as the global marginal benefits [of an international climate policy] exceed every nation's own marginal benefits [of complying with the policy], countries will either want to avoid participating or avoid complying fully, if they do participate." In other words, an effective climate policy must deal with the reality of sovereignty and the nature of international treaty law; countries can simply avoid participating in any treaty that they deem not to be in their interest.

"Writing a treaty that tells parties to reduce their emissions is easy. Making countries want to participate in such a treaty, and making countries want to comply with it, is much harder" (Barret, 2003, p. xiv). Of particular note here is the Kyoto Protocol, which succeeded in devising a global scheme that included emission reductions by most developed countries, and largely in finding countries to participate in it. Of note, of course, are the facts that no developing countries were required to limit their emissions in any way under Kyoto, that the United States never ratified the treaty, and that the treaty only entered into force as a result of Russia's participation, which was essentially bought through an invitation to join the World Trade Organization. The Protocol, however, seems destined to failure in terms of compliance. Most parties are unlikely to meet their Kyoto targets; some will miss by almost laughable margins. Canada and Japan, both of which agreed to reductions of 6 percent below 1990 levels by 2012, are projected to increase their emissions by 38 and 6 percent respectively (UNFCCC, 2007).

The difficulty in obtaining compliance and participation for global climate treaties largely results from the lack of a world government or a Global Environmental Protection Agency that could effectively police the nations of the world and, in its absence, effective compliance mechanisms. The World Trade Organization, which is regarded as the most effective global regime draws much of its success because its Dispute Settlement Panels have real teeth. If nations are found to be non-compliant with WTO rules, the affected parties can retaliate by levying trade restrictions on the offender. An analogous system could not work for the global climate system or any other international environmental agreement for that matter. If one country is found to be out of compliance with its emission reduction targets, allowing other nations to simply increase their emissions would only worsen the problem.[10]

One possible remedy for the compliance problem is to use trade restrictions to enforce emission reductions. In the House-passed climate bill, for example, imports from nations that are not bound by emissions limits or reductions could be subject to a tariff. While such policies, if crafted properly, are likely to be WTO-compliant, creating them in such a way may severely limit their applicability (Veel, 2009). For its part, the WTO is ultimately unclear on whether or not existing international trade rules would permit such a "carbon tariff" (WTO and UNEP, 2009). WTO Director-General Pascal Lamy has written, however, that rather than using the rules already on the books to accommodate climate-related trade restictions, "the relationship between international trade — and indeed the WTO — and climate change would be best defined by a consensual international accord on climate change that successfully embraces all major polluters."

[10] This idea about the difficulty in devising compliance mechanisms in international environmental agreements vis a vis the WTO was introduced to me by David Hunter in his course International Environmental Law at the Washington School of Law, Fall, 2008.

Because of the very nature of international environmental agreements and the climate change problem, participation and compliance with an environmentally-strong global climate treaty will be difficult. Indeed, a trade-off between participation, compliance, and environmental outcome seems inevitable. The only viable alternatives may be a "narrow but deep" agreement that achieves significant reductions from a small number of countries or a "broad but shallow" agreement that asks very little of each country, but achieves universal participation (Aldy et. al., 2003).

Assessing the Copenhagen Accord

The explanation of the rubric above demonstrates the difficulty of properly designing a global climate change policy. Such a policy must attempt to effectively balance or take into account environmental outcome, carbon leakage potential, the cost and benefits of climate action, intergenerational equity, the discount rate, the irreversibility of both greenhouse gases and capital infrastructure, cost-effectiveness, historic, current, and projected responsibility for emissions, the ability to pay for emission reductions, the distribution of benefits from emission reductions, flexibility to incorporate new information, participation, compliance, and the sovereignty of nation - states. Given that laundry list, the fact that 190 plus parties to the UNFCCC were able to find individuals willing to try to negotiate an agreement practically seems like a success. The fact that the Copenhagen Accord outlines a credible approach to climate change that has allowed 122 countries representing more than 83% of global emissions to engage with it seems to qualify as a success (Climate Action Network, 2010). Upon closer inspection, however, it becomes clear that the Accord's strengths in certain areas result from its weakness in others.

The first and most objectionable weakness of the Accord is its environmental outcome;

while the emissions reductions pledged under the Accord are significant, they are a tepid response to the Accord's explicit goal of keeping global temperature rise to no more than 2ºC. "Existing pledges by developed countries, when added together, could represent a substantial effort for reducing [developed country] emissions by 2020 – a 12 to 19% reduction of emissions below 1990 levels depending on the assumptions made about the details of the pledges. But they still fall far short of the range of emission reductions – 25 to 40% – that the IPCC notes would be necessary [to have a moderate to good chance to meet] a 2ºC goal" (Levin and Bradley, 2010). Those 2020 pledges under the Accord do not rule out having a moderate to good chance of reaching the 2ºC goal, they just imply that emissions will have to fall precipitously among developed countries from 2020 to 2050 to reach the 2ºC goal. If the pledges under the Accord are met, but are not increased substantially, in order to decrease annual emissions to 80 percent of 1990 levels, emissions would need to drop roughly 2.5 percent per year (Ibid).

Thus, though the Accord does not explicitly disclose an emissions reduction pathway, an implicit road to the 2ºC goal emerges: moderate emissions in the near-term, followed by significantly more aggressive emissions in later years. Critics might argue that, because there are no explicit emission reductions in the post-2020 period, the Accord simply allows the large polluting nations to delay aggressive action—action that may never come. Be that as it may, while the emissions are lower than recommended by the IPCC, they do not necessarily rule out meeting the 2ºC goal but rather make it more difficult to achieve in later years. Moreover, due to the high level of participation, emissions leakage is likely to be significantly reduced if not eliminated. And, given the fact that the Accord simply ascribes domestic actions into an international schema, the pledges are more likely to be met than were the Kyoto pledges. While the pledges seem uninspiring from an environmental perspective, the likelihood that they will be

met is a significant advantage of the Accord.

Indeed, because the Accord's architecture relies upon domestically determined rather than internationally negotiated pledges, a sheen of credibility underscores these commitments. As Stanford's David Victor argues, "[climate] success depends on many factors, but paramount is the credibility of promises that governments make to each other through international agreements. The trouble with the Kyoto treaty was that for pivotal countries, notably the United States, the promises were not credible. Correcting that error is a central aspect to [success in Copenhagen]" (2009b).

From Victor's perspective there is a clear trade-off between credibility, or a reasonable assumption that pledges will be complied with, and the environmental outcome. While ideally the international community would be able to credibly pledge and comply with ambitious emission reductions, the lesson from Kyoto is that they cannot. If one accepts this reality, the choice becomes one between emission reductions that are ambitious but fairly unreasonable/unbelievable/unlikely to be met, and reductions that are reasonable, believable, and likely to be met but are nevertheless uninspiring. By choosing the latter option, the Accord also implicitly takes a number of stands on the other issues described in the rubric.

While the terms "intergenerational equity" and "discount rate" are found nowhere in the Accord, the agreement nonetheless makes statements about them. By taking relatively minimal emission reductions in the short-term and delaying more aggressive action until later, the Accord implies that people in the future will be better equipped to reduce emissions. In other words, the Accord discounts the future, and does so in a relatively aggressive way in view of the academic discussion on this score.

While the precise cost-effectiveness of the Accord is still an open question because it

takes no explicit stance on how exactly the 2ºC goal will be met, it is clear that the pledge-and-review architecture is not as cost-effective as Kyoto's targets, timetables, and international markets. While the Accord makes several references to private markets, there is no certainty that emission reductions will be able to be transferred across borders. In fact, the Accord eschews the economic elegance of the Kyoto model for something much messier. This outcome is not particularly surprising, as Aldy et. al. note that "proposals that focus on … participation and compliance do so at the expense of cost-effective implementation" (p. 394).

In terms of equity, the Accord delivers a mixed bag. The principal result of the Accord—codifying emission limits from the large developing countries—is a step towards greater equity in global climate policy, as it, for the first time, recognizes the difference between developing countries like China and Mauritius in their respective responsibility and ability to mitigate emissions. Furthermore, there is considerable equity among the developed countries. While the pledges made by Japan and the European countries are on face much more ambitious than the U.S. pledge, a careful analysis shows a somewhat different result.

The absolute reductions pledged by the U.S. are only 3 percent below 1990 levels, compared to 20 percent for the EU and 25 percent for Japan. Because of demographic differences in the countries, however, the U.S. pledge represents per capita emission reductions of 29% below 1990 levels, which is higher than the 24% reductions in per capita terms pledged by both the EU and Japan (World Resources Institute, 2010).

The Accord thus demonstrates a fair degree of equity *among* both developed and developing countries, but the same amount of equity appears absent *between* developed and developing countries. While the pledges from the large developing countries are quite significant and ambitious—particularly those by China and Brazil—the developed country pledges may be

significant, but are not decisively ambitious. This disconnect suggests that the developed countries received a relative bargain from the BASIC countries, which reflects a belief in Washington policy circles that the Copenhagen Accord was a victory for Obama, because he was well-received by the international gathering and yet still committed the U.S. to a relatively weak target.

As noted above, the Accord deserves high marks for participation and likely compliance, though the latter cannot be effectively judged for some time. Similarly, the Accord is flexible in sensible ways. In addition to calling for regular and systematic reviews of all pledges to demonstrate compliance, it importantly calls for an overall review of the Accord to be completed by 2015. Such a review will include an assessment of the latest science, which could indicate that the 2ºC goal needs to be strengthened to 1.5ºC.

Altogether, the Accord manages to effectively balance the many competing elements inherent to climate policy. While it delivers unspectacular emissions reductions and a mixed bag on equity, the agreement deserves high marks for flexibility, participation and compliance. Efficiency is uncertain; those who value latter generations highly and view the irreversibility of changes to the climate system paramount to changes in capital infrastructure will argue that the approach is quite inefficient. Those who have opposite views on intergenerational equity and irreversibility will argue that the Accord represents an efficient means to the 2ºC end.

This analysis of the Accord and the rubric for judging global climate policy recalls President Truman's request for a "one-handed economist," because he had become intolerant of his economic advisers continually reminding him of the trade-offs inherent in various policies by stating their views in the terms of "on the one hand … but on the other." While the climate-concerned may likewise wish for a one-handed approach to this global problem, a fair view

recognizes that one does not exist. Like all climate policy approaches, the Copenhagen Accord includes tradeoffs. A thorough examination of those demonstrates that the Accord itself is a success.

V. The Success of the Copenhagen Accord

The Copenhagen Accord is a successful approach to international climate policy because it represents a viable approach to the problem that also accommodates existing political dynamics. Moreover, the Accord offers the possibility, perhaps even the likelihood, of creating a virtuous cycle in which international negotiations are more productive and individual states are more likely to enact strong climate policies.

In 2001, British Deputy Prime Minister John Prescott argued that the United States should sign onto the Kyoto Protocol because the agreement was "the only game in town" (Lean, 2001). Based on the views of some commentators, that belief still seems to be alive and well more than nine years later. While the mandatory emission reductions under Kyoto are set to expire in 2012, many still believe that a Kyoto-style agreement is the only way to solve the climate crisis. As academic research has shown, however, Kyoto-style targets and timetables are only one viable approach to international climate policy; the Accord represents another. (Aldy, et. al. 2003; Aldy and Stavins, 2007; Barrett, 2003).

While the Kyoto approach is an economically elegant and cost-effective way to reduce emissions, it fails to effectively deal with the reality that countries will simply not participate in or comply with international environmental agreements that are not in their best interests (Barrett, 2003). Indeed, the environmental outcome of Kyoto has been significantly lower than

what the treaty originally promised (UNFCCC, 2007).

Unlike the top-down style of Kyoto, the Copenhagen Accord represents a bottom-up pledge and review approach to climate change, in which countries submit their domestically determined climate change actions and then allow them to be internationally reviewed. Proponents of such an approach (or elements of it) can be found throughout the academic climate policy architecture literature developed over the past seven years (e.g., Aldy, et. al., 2003; Barrett, 2003; Barrett, 2007; Pizer, 2007; Prins and Rayner, 2007). Australia proposed such a policy approach in early 2009, and it was likewise considered at the outset of the Kyoto negotiations. In October, 2009, the head of environmental economics at Harvard, Robert Stavins, described the fundamental structure of the Accord as a "portfolio of domestic commitments," and presaged that "it might emerge from a global meeting such as the [COP-15]." He urged that negotiators "not dismiss this new approach out of hand." While negotiators clearly listened, many of the climate-concerned did not (e.g., McKibben, March, 2010; Melini, 2010).

At present, the global political dynamic suggests that a robust near-term environmental outcome is incompatible with credible emission pledges from nations (Victor, 2009a). As a result, the Accord's pledge-and-review architecture is the best policy response to tackle climate change. The criteria review above demonstrates that the sovereignty of nation states—their ability to simply not participate in or comply with any treaty that is not in their interest—creates a fundamental tension between participation and compliance on the one hand and environmental outcome in global climate policy on the other. "Writing a treaty that tells parties to reduce their emissions is easy. Making countries want to participate in such a treaty, and making countries want to comply with it, is much harder" (Barret, 2003, p. xiv).

The current political environment in the largest historic emitter, the United States,

exacerbates this fundamental tension. At present it is decidedly unclear whether arguably the most liberal Congress since the UNFCCC was signed in 1992 will be able to pass a climate bill that would reduce U.S. emissions only 3 percent below 1990 levels by 2020. Given that it is at best an even-money proposition that such legislation will pass, one cannot imagine the U.S. doing anything more aggressive. As a result, other nations would be hard pressed to significantly increase their emission reductions pledges for fear of exporting jobs to the more laxly regulated U.S. Moreover, the recent global recession has put issues of jobs well ahead of climate protection in all countries, making aggressive environmental action even more difficult politically.

Given this fundamental tension between environmental outcome and participation, the only viable alternatives, as noted above, may be a "narrow but deep" agreement that achieves significant reductions from a small number of countries or a "broad but shallow" agreement that asks very little of each country but achieves universal participation (Aldy et. al., 2003). Unlike the narrow but deep agreement, a broad but shallow agreement, such as the Copenhagen Accord, obviates concerns about emissions leakage. A narrow but deep policy also runs the risk of following Kyoto's fate and garnering lackluster participation and compliance because of concerns about economic competitiveness with non-regulated nations. Nevertheless, a shallow but broad approach like the Accord's pledge and review architecture "could transform the credibility of climate actions and provide an effective alternative to [unproductive yet never-ending] global negotiations" (Victor, 2009b).

A Virtuous Cycle

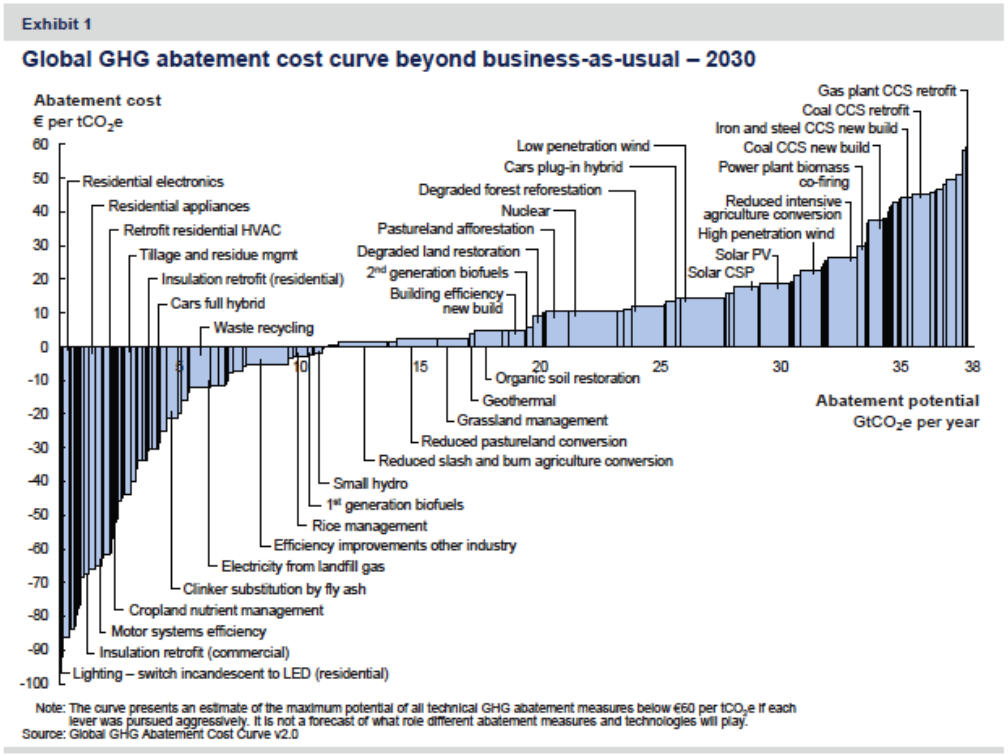
Moreover, the design of the Copenhagen Accord offers the possibility that in the future nations will be more likely to make more ambitious emission reductions because it a) enhances the credibility of international emissions pledges and b) could demonstrate that economic growth

is compatible with climate action. As a result, the Accord could lead to a virtuous cycle, in which international negotiations are no longer kabuki theater-like events fraught with drama and disagreements but rather become venues for demonstrating compliance and action.

Both Stavins (2009b) and Victor (2009b) posit that a key advantage of the pledge and review climate policy embedded in the Accord is its potential for creating a virtuous cycle of cooperation. They assume that a major deterrent to climate action by nations is the fact that other nations are not acting. In other words, they see climate change as a collective action problem. Their hope is that the review element of an approach like the Accord will demonstrate to the global community that a given country's pledge is indeed credible. As nations begin to trust others to enforce their climate commitments, it becomes simpler to agree to more aggressive emissions reductions at home. While this argument is true and important, it represents only half the story.

Somewhat contrary to the expectations of economic theory, "a binding international agreement is neither necessary nor sufficient for domestic action" (Pizer, 2007, p. 302). A look at regional and state policies in the United States (e.g., California's climate policy and the Regional Greenhouse Gas Initiative in New England) and the fact that the European Union implemented its Emissions Trading Scheme prior to the Kyoto Protocol's compliance period suggests that communities are willing to enact meaningful climate policies outside of a full international agreement. China's emissions intensity and renewable energy policies have been entirely voluntary and yet achieved significant emissions reductions. Moreover, private companies like Wal-Mart, Coca-Cola and Chevron have voluntarily decided to reduce their own emissions substantially through a suite of initiatives (Diamond, 2009).

These states, nations, and companies are voluntarily reducing emissions not because they simply want to help the earth nor to avoid the ire of environmentalists (though this is certainly part of their strategy). They are reducing their emissions because they believe doing so offers a path towards greater economic growth and increased competitiveness. As Jared Diamond writes, "economic reasons furnish the strongest motives for sustainability" (Ibid). As Exhibit 1 (McKinsey, 2009) demonstrates, many emission reductions actually have a negative cost, which



is to say that they are economically beneficial. Furthermore, many of the abatement measures that actually cost money (those on the right side of the image), such as solar energy, are expected to become considerably cheaper as the technology improves.

Some forward thinking nations (China) and companies (Wal-Mart) are embracing low-carbon policies because they believe them to be economically justifiable in their own right. Nevertheless, many others still resist climate policies. This resistance, however, is not primarily

due to a lack of action in the rest of the world (e.g. international climate policy could just as easily stymie U.S. domestic action as promote it). Rather, they resist climate action because of fears of the economic consequences, particularly during times of high unemployment. From this perspective, the most important virtuous cycle that the Accord might create is then one that demonstrates that emissions reductions are actually compatible with economic growth. Indeed, much of the "green jobs" rhetoric that surrounds the climate policy debate rests on this assumption.

In short, the review element of the Accord creates a situation in which countries come to the international stage to share their experiences with climate policy. If you expect those experiences to be positive (i.e., they demonstrate that nations have meet or at least tried in good faith to meet their domestically determined climate goals and that climate action is compatible with economic growth), then international meetings will serve to "prod countries toward stronger domestic policies.... Rather than the current UNFCCC/Kyoto process, where annual negotiations are an opportunity to disagree over international policies, the [Accord's] process would have annual meetings that allow scrutiny of *national* policies" (Pizer, p. 309, his emphasis). To say that such a change in the UNFCCC process would be welcome is an understatement.

At present, international climate negotiations are largely about perception, but the Accord would make future meetings about action. Consider the case of China. China was largely blamed in the European press for what many Europeans viewed as a failed summit, yet China is already acting quite strongly to limit their emissions growth. The uproar over the behavior of the Chinese diplomats in Copenhagen is particularly curious after taking into account equity concerns. After factoring in per-capita emissions, historic responsibility, and ability to pay, the Chinese are arguably the most aggressive large climate actors on the global stage. Due to the efficiency

policy in its 11th Five Year Plan, China reduced its energy intensity by 13.45% below 2005 levels by July, 2009. As a result, China abated roughly one billion tons of CO_2, more than three times the promised (but unlikely to be delivered) 300 million tons of CO_2 reductions from the European Union under the Kyoto Protocol (Worldwatch Institute, 2009). Nevertheless, because Chinese diplomats were routinely undiplomatic in the Bella Center during the Copenhagen conference, much of the press blamed them for any perceived failure at COP 15. Such a judgment reflects a backward tendency among some of the climate-concerned: what China has actually done to limit their emissions is of little import relative to the way they act on the international stage. The Americans and Europeans, on the other hand, are applauded for strong commitments, though little attention is paid to the relative timidity of their action.

The Accord's review process would essentially reverse this dynamic; climate action would take center stage and trump perception, as national policies would need to be reported and internationally verified. Indeed, the review element of the Accord is in many ways its saving grace. It makes both the Accord at large and individual climate pledges credible. And yet, due to the Accord's tenuous legal standing, international review is likely the most vulnerable part of the agreement going forward.

VI. The Failure of the Copenhagen Conference

Despite its potential and the fact that 122 countries representing more than 83% of global emissions have decided to engage with it, the Copenhagen Accord is not allowed to officially represent a negotiating track in UN negotiations because five countries that represent less than one percent of global emissions refused to let the COP adopt it. In this sense, the Copenhagen

Conference was a failure. To avoid the complete abandonment of the UN process, the COP should amend its rules so that consensus is no longer required to adopt a decision.

International Legal Challenges

As noted above, at Copenhagen the COP did not adopt the Copenhagen Accord but simply "took note" of it. COP rules require consensus for adoption, and five delegations (Venezuela, Bolivia, Cuba, Nicaragua, and the Sudan) blocked every effort to adopt the Accord by consensus decision. This lack of adoption has created problems with both the implementation of the Accord and the status of negotiations going forward.

Without adoption, the COP cannot play the institutional role that the Accord imagined for it in implementing several parts of the agreement. As UNFCCC executive secretary Yvo de Boer wrote in his January 25 communication to the Parties, "since the COP neither adopted nor endorsed the Accord, but merely took note of it, its provisions do not have any legal standing within the UNFCCC process even if some parties associate themselves with it." This lack of UNFCCC authority directly affects seven specific aspects of the Accord[11], which require institutional support for their establishment or implementation.

The Accord establishes three new bodies—a High Level Panel to study potential sources of revenue to deliver $100 billion per year by 2020; the Copenhagen Green Fund to support mitigation and adaptation projects in developing countries; and a Technology Mechanism to accelerate technology development and transfer—all of which need to be accountable to and

[11] The seven specific aspects are the establishment of i) the High Level Panel, ii) the Copenhagen Green Fund, and iii) the Technology Mechanism; the adoption of guidelines for measurement, reporting, and verification of iv) emissions reductions and financing by developed countries and v) developing country mitigation actions supported by international assistance; vi) guidelines for national communications by developing countries through which they measure, report and verify their mitigation actions with "international consultations and analysis;" and vii) an assessment of the implementation of the overall Accord to be completed by 2015.

established by an international body. The Accord specifically directs the High Level Panel to be accountable to the COP and calls for the Copenhagen Green Fund to be "an operating entity of the financial mechanism of the Convention," though it is silent on the institutional support for the Technology Mechanism. Because of the lack of full adoption of the Accord, neither the COP nor the UNFCCC can play their respective roles in overseeing the High Level Panel and the Copenhagen Green Fund.

Recognizing this institutional void, the United Nations itself stepped up to fill the gap. Secretary-General Ban Ki-moon selected British Prime Minister Gordon Brown and Ethiopian Prime Minister Meles Zenawi to co-chair a High Level Advisory Group on Climate Change Financing, which also includes George Soros, Larry Summers, and fifteen other financial and political leaders. This High Level Advisory Group is essentially playing the role that the Accord imagined for the High Level Panel. While the UN can fill the void to play the oversight role in the establishment of all of these new groups, less certainty exists about who will write (and adopt) the guidelines that the Accord envisioned for the implementation of the review aspect of the agreement.

The Accord designates the COP to adopt guidelines for the international review of emissions reductions and financing by developed countries and actions taken by developing countries to mitigate climate change both with and without financial help from industrialized countries. The most controversial of these provisions, indeed the most controversial and highly debated provision of the Accord, is the review requirement, which requires developing countries to submit "national communications" every two years that report, measure and verify their mitigation actions taken without international financial support. These communications are to include "international consultations and analysis under clearly defined guidelines" adopted by

the COP. The development of guidelines for the "international consultations and analysis" for the verification of developing country mitigation actions would have been highly controversial had the COP adopted the Accord. Without adoption, it now seems possible, perhaps even likely, that China and India will use the lack of COP adoption to void attempts to internationally verify their mitigation actions.

After Copenhagen: An Uncertain Future

The final agreement's inclusion of international verification of mitigation actions by developed countries that are not recipients of climate assistance (i.e., the mitigation actions of India and China) was a major concession and a real breakthrough. The lack of UNFCCC adoption, however, provided an opportunity for China and India to walk back from this concession, which they have done in the months following COP 15. Indeed, while both China and India have indicated that they wish to be listed in the Accord's chapeau or introductory text and thus be associated with the Accord, they have both expressed in communications to the UNFCCC that the Accord does not represent a third track for international negotiations.[12] As the February 1 letter from Chinese Premier Wen to the Danish Prime Minister Rasmussen states: "It is neither viable nor acceptable to start a negotiating process outside the framework of the UNFCCC and the Kyoto Protocol." China's (and India's) preference to continue negotiations outside of the Copenhagen Accord is in direct conflict with the United States, which, according to chief negotiator Todd Stern, believes that "the Accord should materially influence further negotiations. This was not, after all, a casual agreement. It was the product of hands-on engagement by a set of representative world leaders."

[12] The first two tracks of international negotiations are those set out in Bali, i.e. the Kyoto-track and the Long-Term Cooperative Action track.

The United States wants the Accord to be fully adopted and operationalized, while the other chief negotiators of the agreement wish to limit its impact, leaving the post-2012 international climate approach as murky as ever. Many of other the key stakeholders seem to offer lukewarm support for the Accord going forward, further intensifying the current paralysis.

Amending COP Rules

To end the stalemate that stopped the Copenhagen Accord in its tracks, the COP should amend its rule requiring consensus to adopt any decision. The difficulty, of course, is that amending COP rules also requires consensus, but that does not limit the importance of easing adoption of global climate policy. As demonstrated above, the Accord represents a non-ambitious, yet practical approach to solving the climate crisis. It provides a way for countries to begin acting now and a process for increasing action later. Yet even if one disagrees with that assessment of the Accord, COP rules still need to be amended to ease adoption of decisions. Otherwise, more time will be wasted trying to get 192 diverse nations to completely agree on how to deal with "the hardest political problem the world has ever had to deal with" (The Economist, 2009). While it may be difficult to achieve the consensus needed to amend COP rules, the climate-concerned should nevertheless endeavor to do so. Otherwise, the options seem to be to either allow inaction to continue as the norm of international climate policy or to move negotiations and agreements out of the UN process. While some support moving the process out of the UN (Ballentine, 2010; Doniger, 2009), all countries need to be included in international negotiations because all countries will be affected by climate change. Importantly, the nations that stand to be the most affected by climate change—the small island nations—voted for the adoption of the Accord. Nevertheless, these countries are excluded from both the G-20 and the Major Economies Forum, the two venues most often discussed as possible alternatives to the

UNFCCC. Indeed, regardless of one's view on international climate policy architecture, if one favors climate action to climate negotiations, one should push for amending the COP rules. The new majority needed for the COP to adopt a decision could conceivably be 90 percent of parties present and/or 80 percent of global emissions. The specifics of the new arrangement are not particularly important, so long as the unrealistic expectation of achieving consensus is abandoned.

VII. Conclusion

In response to Maurice Strong's question posed in the introduction, the Copenhagen Accord was indeed a success, but not a real one. This lack of real success, however, is not the result of political posturing by world leaders that Strong was referring to in 1992. Rather, the Accord is a failure because unreasonable COP rules have left it with no legal standing.

The Copenhagen Accord represents a viable agreement to reduce greenhouse gas emissions. While the pledges submitted by nations under it are somewhat underwhelming, the Accord's review process provides an avenue for future climate negotiations to become increasingly productive. Were nations to proceed under the Accord and to allow their mitigation actions to be internationally reviewed at regular intervals, nations' pledges of climate action would gain credibility and the global community would better appreciate the economic benefits associated with emission reductions.

Nevertheless, many commentators still revile the Accord because they argue that its environmental outcomes are too weak. Environmental outcomes, however, cannot be more robust because the political will does not exist within the major emitters to make them more

ambitious. Perhaps many environmentalists are reluctant to consider the Accord a success because it represents their own failure during the past twenty years. A primary role of environmentalists is to create the political will to allow for environmentally friendly policies to emerge, and on climate change, we have failed spectacularly, particularly in the U.S.

Moreover, the Accord reflects many of the approaches to climate policy advocated by President George W. Bush Administration, who is not exactly a modern-day Teddy Roosevelt. The fact that these policy approaches were not completely abandoned by the Obama Administration—which has without question brought a renewed energy to climate policy discussion in the U.S. and around the world—demonstrates that there has been merit in them all along and that nothing particularly more ambitious is politically feasible.

It is true that the approach embodied by the Copenhagen Accord is not a panacea for climate change, but nothing could be. The climate challenge is simply too enormous to tackle in one effort. While a modest, middle-of-the road approach may not be what many environmentalists want, it is the best available option and accordingly what the environment needs.

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